Quality Control

			DQA:
NCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE	

									QA Closea:	Date:	A Company of the Comp
Work Orde	er:				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part N	No				Rework Scrap		Skid-tube Machining	Crosstube Small Fab		Water Jet d. Eng. Coor.	Engineering Quality
NCR N	No				Use-as-is Work Order Update	The	rmoforming Large Fab	Finishing Composite	Kec/Stol	re/Packaging Supplier	Other
Root				Descri	iption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	,	or Non-conformance	Chief Er	g Desc	ription	Date	Verification	QC Inspector
Doc/Data						·					
Equip/Tooling											
Operator						Í					
Material										**	,
Setup											
Other										•	
Process											
Supplier											·
Training											
Unapproved			<u> </u>							<u> </u>	
. ,	***************************************		.* 5t/k)			AULT CA	regory	- 1994	4:4	¥.2	4.
Ländi			1 +1357.1.52	it-16.	General *	,. 	3 145	Touch Pight.	1	to the	
	Bending	• -		<u> </u>	Bend	Grain			Ovalized	<u> </u>	Pressure/Forced
		lot Conce	ntric to	o/s	BOM/Route	Hard		<u> </u>	Over/Under	—	Temperature/Cure
	Cracks			_	Broken/Damaged	⊢ `	ction Incomplete		Part Incorre	├	Weld
	—	/Crimped			Burrs	\vdash	ctions Incomplete/	'Unclear	Part Lost/M	-	Wrong Stock Pulled
	Cuffs			<u> </u>	Contamination	⊢ ⊣	itenance	<u> </u>	Part Moved		
	Heat Tre			<u> </u>	Countersink	 	beled		Positioned \		, 7
		on Strip in	Tube	<u> </u>	Cut Too Short	Misre			Power Loss/	/Surge	Other
	Ripples i			L	Drill Holes	Offse					
		Waves in E		n	Drawing		f Calibration				
		Sequence		<u> </u>	Finish	Out	f Sequence				
	Wave/T	wist in Tub	oe -	1	Folio	Outs	de Dimensions				

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

100839

Work Order ID 100839

May 1, 2013 7:31:50 AM

Item ID: D2154

Revision ID:

Item Name:

Stud Bracket

Start Date: Required Date: 4/30/13

4/30/13

OC:

Start Qty: 8.00

Req'd Qty: 8.00

Accept

N900040100

Setup Start

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Date:

Tooling:

0.00

0.00

SPC(Y/N):

~ 1 Up/

Ran Hours

Date:

- 115

Date:

Run

Sequence H).

Work Center ID

130

130

Small Fab

Small Fab

Operation

Description -

Small Fab

Memo

Deburr if necessary

NC BRAKE

140 Brake NC

Memo

0.00

0.00

Form as per Dwg D2154Rev:

150

Brake NC

140

150 QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

Tool#

Plan Code

Accept Qty. ..

Reject . Cty

Reject Number

insp. Stamp

NA

12

SB 17/06/19

10

			DQA:	Date:	
ICD.	Man / Na	MODE OPDED MON CONFORMANCE / HIDDATE			

NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORI	MANCE / UP		QA Closed:	Dat	e:	
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT,	PROCESS		
Part I	•					Rework Scrap Use-as-is Work Order Update		•	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. e/Packaging Supplier		ering uality Other
Root						ption of work order update	1	nitial		tion	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Ir	rspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								·						
				<u>. </u>		F	AUL	T CATE	GORY		<u> </u>	<u> </u>		
Landi	ng G	Gear		M.	··········	General								1
		Bending Centre No Cracks Crushed/G Cuffs Heat Trea Inspection Ripples in	Crimped. It n Strip in Bend	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	ion Incomplete tions Incomplete/ enance eled d	Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct ssing Vrong	Weld	/Forced ture/Cure tock Pulled
		Torque W	aves in E	xtrusio	n [Drawing	L	Out of	Calibration					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

May 1, 2013 7:31:50 AM

Item ID: **Revision ID:** D2154

Accept

N900040100

Setup Start

Item Name:

Stud Bracket

Start Date: 4/30/13 Required Date: 4/30/13

Start Qty: 8.00 Req'd Qty: 8.00

Cust Item ID: **Customer:**

Reference:

Approvals:

Process Plan:

QC:

Date: Date:

Tooling:

SPC(Y/N):

Date:

Date:

Run

Sequence 10/

Work Center ID

Set Up/ Run Hours

7 of iD = Feet# Plan. Code.

Qty

Accept - Reject

Reject

Number Stamp

160

160

Powdercoat

Powder Coating

170

Quality Control

Operation

Description

White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel

0.00

OVEN TEMPERATURE

QC3- Inspect Part Finish

START TIME:

0.00

Memo

0.00

180

120 Packaging

Packaging

Identify as per dwg & Stock Location: 51005

Memo

0.00

0.00

12 x

		DQA:	Date:	
Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			

NCR:	Yes	/ No				WORK ORDER NON-	CON	FORN	MANCE / UP		QA Closed:	Date	e:
Work Orde	or:	•		a		DISPOSITION				AGAINST DE	PARTMENT,	/PROCESS	
Part I	No.					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	l	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root	- 1			1	Descri	ption of work order update	_ Ir	itial	Ac	tion	Sign &		
Cause	ı	Date	Step	Qty		or Non-conformance		ef Eng		cription	Date	Verification	QC Inspector
Doc/Data	П	Date	Step	4.7									
Equip/Tooling													
Operator													
Material													
Setup											-	ļ	
Other	Ш												
Process]		
Supplier	Ш												
Training	Ш										1		
Unapproved			<u> </u>	<u> </u>	<u> </u>						<u> </u>	<u> </u>	
		. , , , , , , , , , , , , , , , , , , ,		: statike			FAULT	CATE		<u> </u>		 	
Landi		,		Guera	ຊວນ. —	General		Grain	* * * #	Mar We	Ovalized	,;	Pressure/Forced
	H	Bending			0/6	Bend BONA/Bouts				-	Over/Under	tolorance	Temperature/Cure
	\vdash	Centre No	ot Conce	ntric to	^{0/5}	BOM/Route Broken/Damaged		Hardwa Inchosti	re on Incomplete	 	Part Incorre	 -	Weld
	-	Cracks Crushed/0	Crimmad	•		Burrs	\vdash	,	ions Incomplete	/Unclear	Part Lost/M	- t	Wrong Stock Pulled
ĺ	ь—	Cuffs	Crimpeu	·	-	Contamination	\vdash	Mainte	*	Officieal	Part Moved		
İ	\vdash	Heat Trea	. +	,		Countersink		Mislabe		<u> </u>	Positioned \		
	-	Inspection		Tube		Cut Too Short		Misread			Power Loss		Other
	—	Ripples in		:	 	Drill Holes	\vdash	Offset	-	<u> </u>	7	ت ر	
		Torque W		Extrusio	_n	Drawing	-		Calibration				
	-	Turning S			" 	Finish	-		Sequence				
		Wave/Tw	-			Folio			Dimensions				

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

100839

Work Order ID 100839

May 1, 2013 7:31:50 AM

Required Date: 4/30/13

Item ID:

D2154

Revision ID:

Item Name:

Stud Bracket

Start Date:

4/30/13

QC:

Start Qty: 8.00

Req'd Qty: 8.00

8

Accept

N900040100

Setup Start

Stop

Cust Item ID:

Customer:

ooi ID

Reference:

Approvals:

Process Plan:

Date:

Date:

Tooling:

SPC (Y/N):

est Up7

Run Hours

Date:

Date:

Run

Stop

Sequence ID/ Work Center ID

Operation Description

QC21- Final Inspection - Work Order Release

0.00

190

Quality Control

OC

190

Memo

0.00

foo! # Plan

Code

Accept Qty

Reject Qty

Reject

fusp. Number Stamp

MB-06-24

										DQA:	Date	:
NCR: Y	es / No				WORK ORDER NON-	CONI	FORN	/IANCE / UPD	DATE	QA Closed:	Date	: \
Work Orde	ar.				DISPOSITION			30000	AGAINST DE	PARTMENT	PROCESS	
Part N	lo				Rework Scrap Use-as-is Work Order Update		N Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Ini	itial	Act	ion	Sign &		
Cause	Date	Step	Qty	•	or Non-conformance	Chie	ef Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data					•							
Equip/Tooling					•	1						•
Operator												
Material												
Setup												
Other												
Process		1	.									İ
Supplier												
Training												İ
Unapproved										<u> </u>		
					F	AULT	CATE	GORY				
Landir	ng Gear				General	$\overline{}$				٦	-	- 1
	Bending				Bend	-	Grain			Ovalized		Pressure/Forced
	Centre N	ot Conce	ntric to (O/S	BOM/Route	—	łardwa		ļ	Over/Under	├	Temperature/Cure
]	Cracks				Broken/Damaged	\blacksquare		on Incomplete	<u> </u>	Part Incorre		Weld
	Crushed/	Crimped.			Burrs		nstruct	ions Incomplete/U	Jnclear	Part Lost/M	issing	Wrong Stock Pulled
ļ	Cuffs				Contamination		Mainte	nance		Part Moved		
	Heat Trea	at			Countersink	∐ ^	∕islabe	led	<u> </u>	Positioned \		\neg
	Inspectio	n Strip in	Tube		Cut Too Short	\vdash	∕lisreac	i		Power Loss,	'Surge	Other
	Ripples in	Bend			Drill Holes		Offset					
	Torque W	Vaves in E	Extrusio	າ [Drawing		Out of C	Calibration				
	Turning S	equence			Finish		Out of S	Sequence			· · · · · · · · · · · · · · · · · · ·	

Outside Dimensions

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Required Date: 4/30/13

Required Qty: 8.00

Picklist Print

May 1, 2013 7:31:50 AM

Work Order ID:

100839

Parent Item:

D2154

Parent Item Name:

Stud Bracket

Comments:

IPP: C03.08.08Reformat: Remove TumbleKJ/RF

IPP Rev:D NowOn Waterjet 07-04-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased	No			100	sf	268.4214	0.0333	0 .280421 1			Jm13-6
304/316 Sheet .063						:				0.5	v		JMISTE

<u>Location</u>	Loc Qty	Loc Code	
MAT020	268.4213688		_
122 1:5	D+713688		
123136	140.8		
124428	29		_
124572	98.45		_
1069		15 623.	- 7

Start Date: 4/30/13

Start Qty: 8.00

125599

12

			DQA:	Date:
ICD.	Vos. / No	WORK ORDER NON-CONFORMANCE / UPDATE		

NCR: Y	Yes	/ No				WORK ORDER NON-	CON	FORI	MANCE / UP	DATE	QA Closed:	Date	::
Work Orde	er: _					DISPOSITION	,			AGAINST DE	PARTMENT,	/PROCESS Water Jet	T
Part N	-					Rework Scrap Use-as-is Work Order Update			Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-i	d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root Cause		Date	Step	Qty	1	ption of work order update or Non-conformance		itial ef Eng	Ĭ	tion cription	Sign & Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved											Ţ		
				\		F	AULT	CATE	GORY				
Landii		ear Bending Centre No Cracks Crushed/O Cuffs Heat Trea Inspection Ripples in	Crimped it n Strip in Bend	Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		nstruct Mainte Mislabe Misrea Offset	ion Incomplete tions Incomplete, enance eled	/Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other

Out of Sequence

Outside Dimensions

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Turning Sequence

Wave/Twist in Tube

Finish

Folio

DART AEROSPACE LTD	Work Order:	100 139
Description: Bracket, Stud	Part Number:	D2154
Inspection Dwg: D2154 Rev: C		Page 1 of 1

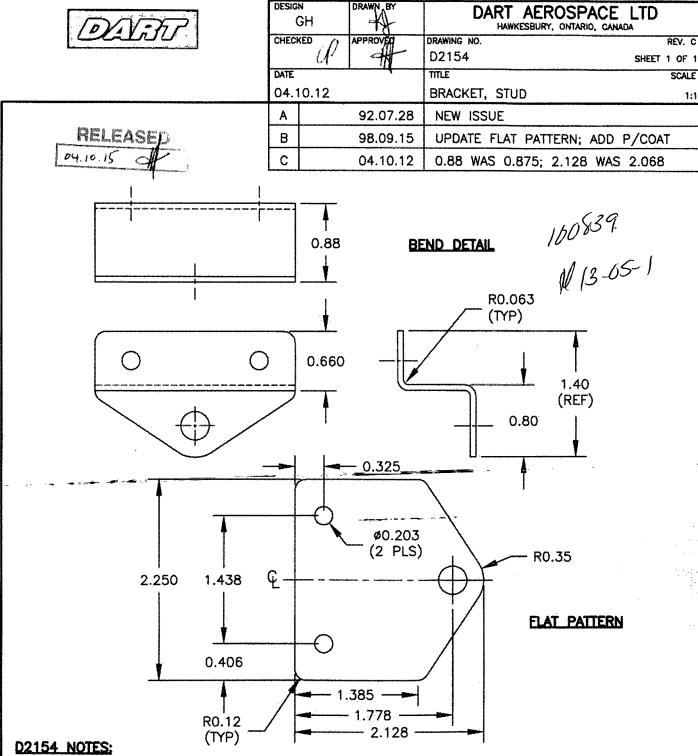
FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.250	+/-0.010	2.25			V SKM-01	
1.438	+/-0.010	1.437			V	
0.406	+/-0.010	0.407			V	
1.778	+/-0.010	1.785	-		V	
2.128	+/-0.010	2.137	~		V	
0.325	+/-0.010	0.328				
Ø0.203	+0.005/-0.001	0.204	<i>i</i>		V	
0.063	+/-0.010	0.057			~	
Ø0.320	+0.006/-0.001	0.321	V			
					4	
				-		
	·					

		,					
N	leasured by:	al	Jm	Audited by:	27	Prototype Approval:	N/A
	Date:	13-6-	6	Date:	1367	Date:	N/A

Re	v Date	Change	Revised by	Approved
Α	07.04.30	New Issue	KJ/JLM ,	_
В	07.09.06	Ø0.320 dimension added	KJ/JLM	E



- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED)
- 2B FINISH 0.063 THICK (M304S16GA)
 2) FINISH: POWDER COAT WHITE (REF: 4.3.5.2) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLÉSS OTHERWISE NOTED
- ALL DIMENSIONS ARE IN INCHES
- IDENTIFY WITH PART NUMBER AND BATCH NUMBER USING A FINE POINT PERMANENT INK MARKER.

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